

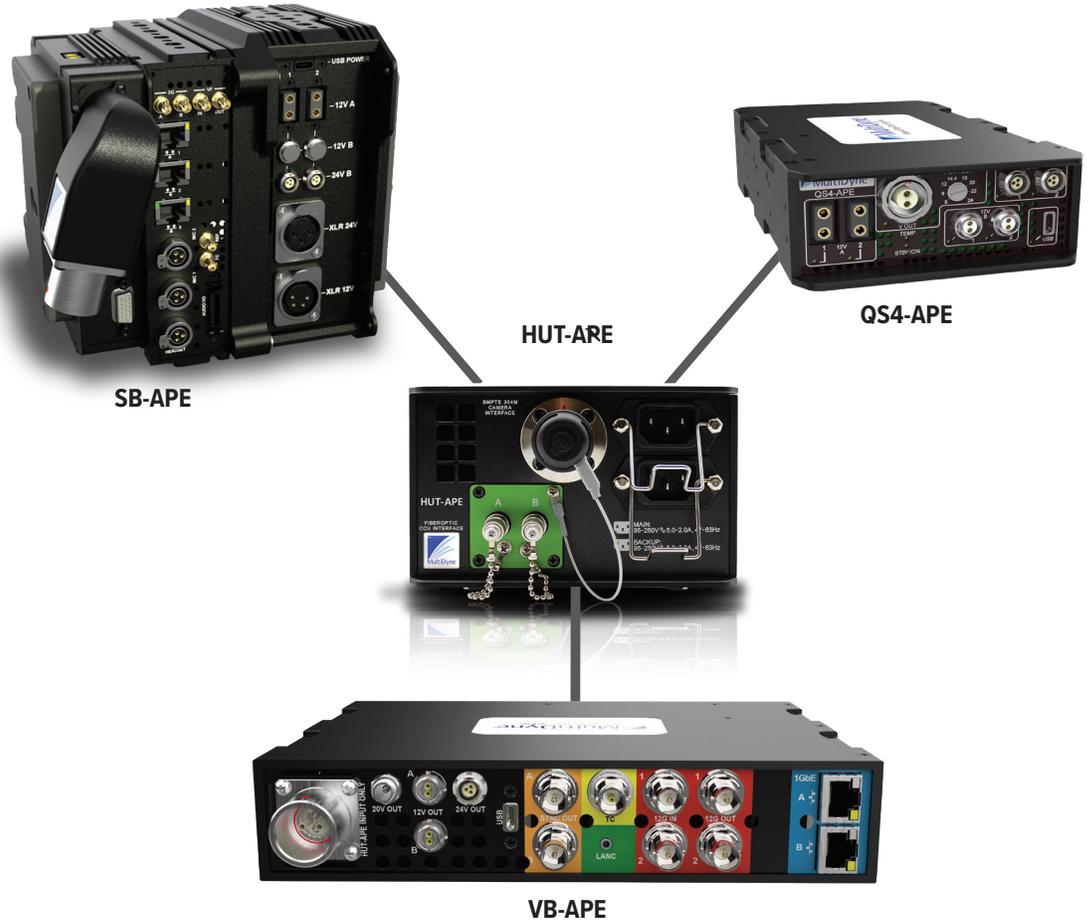
## FEATURES

- ▷ Works With HUT-APE
- ▷ SMPTE 304M Standard
- ▷ Operate Cameras on Plain Single Mode Fiber
- ▷ Take Advantage of Installed Fiber Backbones
- ▷ Extend Distance Without Sacrificing Performance
- ▷ Plug & Play Operation with Automatic Camera Recognition
- ▷ Carry Less Hybrid Cable
- ▷ Choice of Optical Connectors
- ▷ Can Provide Power for Cameras Up to 3km
- ▷ Supports Camera Chains from Sony, Grass Valley, Panasonic, and more
- ▷ Works with Optional Optical Repeater/ Remapper FiberSaver
- ▷ Standard Remote Camera Shut-Off
- ▷ Rugged Design
- ▷ Designed and Manufactured in the USA

## APPLICATIONS

- ▷ Remote Broadcasting
- ▷ Sports Production
- ▷ Shared Control Rooms
- ▷ Campus Facilities
- ▷ Arenas and Stadiums

## Extend Camera Chains Beyond SMPTE Cable Limitations Via Standard Single Mode Fiber



The QS4-APE, SB-APE, and VB-APE products, combined with MultiDyne's HUT-APE, AC mains operated Power Supply, provide a remote power extension and distribution solution for various television broadcast electronic devices such as cameras, prompters, viewfinders, etc., through SMPTE 304M Hybrid Fiber Cable.

The QS4-APE model is a versatile "throw-down" unit providing a selectable 5 VDC, 9 VDC, 12 VDC, 14.4 VDC, 18 VDC, 20 VDC, 22 VDC or 24 VDC main output via a LEMO EEG.2B.302.CLL connector for general applications, as well as multiple accessory outputs: 2, D-Tap/P-Tap 12 VDC outputs; 2, LEMO EEG.0B.302.CLL connector 12 VDC outputs; 2, Fischer DBP 102 A052-139 connector 24 VDC outputs and a "power only" USB-C port to operate and charge devices such as cell phones, computer tablets etc. with up to 15 WDC available power.

The SB-APE model is tailored more specifically to "camera-back" operation, where the APE power supply is integrally joined with MultiDyne's camera docking 'Silverback' product. The main output from the SB-APE model is ported to one of three selectable outputs to provide optimal flexibility: A 3-Pin Female XLR for 24 VDC output, a 4-Pin Female XLR for 12 VDC output or a battery emulator plate affixed to the SB-APE to dock directly onto the camera's battery plate.

The voltage output to the camera is automatically adjusted to 12 VDC or 24 VDC based on configuration information detected from the battery plate on the camera. Additionally, the same complement of accessory outputs mentioned above for the QS4-APE model are also present on the SB-APE model.

## HUT-APE

Advanced Power Extension



The HUT-APE system frees camera chains from the limitations of hybrid copper and fiber cabling permitting cameras to be separated from their CCUs by distances of over 10km using inexpensive, conventional single mode fiber. This has many advantages over SMPTE hybrid cable including:

- Eliminating RF, EMI and grounding issues
- Faster set and strike times saves time and money
- Reduced weight makes for lighter OB trucks, B-units and cable shipments

### CONNECT ANYWHERE EASILY

The plug and play system allows camera chains to connect via a facility's fiber infrastructure or on tactical fiber cable in the field using industry-standard connectors, such as STs, LCs, SCs, or OpticalCON. The HUT system works by “spoofing” (or “tricking”) the camera and CCU into seeing a physical copper connection between them when connected only by single mode fiber cable.

### LOCAL OR REMOTE POWER

After a long run of single mode fiber, HUT-enabled camera systems can be configured in one of two ways:

1. Power the camera with the HUT-APE with up to 3km of hybrid cable. Power is sufficient for hand-held cameras or cameras installed in sleds with long lenses and other high-power accessories.
2. Power the camera locally and use the HUT-CS.

### ROUTE AND MULTIPLEX CAMERAS

Once the hybrid cable is removed, a camera chain can be easily routed through optical routers or used with MultiDyne's FiberSaver systems to multiplex up to nine cameras onto just one strand of a single mode fiber.

### USE LESS FIBER WITH FIBERSAVER

While passive to the camera chain optics, the HUT-APE can be used with the MultiDyne line of FiberSaver wavelength shifting muxes.

- Multiplex a camera chain onto a single fiber strand
- Boost the optical range
- Remap the camera & CCU optics to different wavelengths

### HUT-APE SUPPORTS THE FOLLOWING SYSTEMS:

MultiDyne	SilverBack-APE: Advanced Power Extension adapter with multiple power outputs. Can be matched with any Camcorder or Cine cameras from any manufacturer. Attaches to a battery plate, on the back of a camera, from IDX or Anton Bauer
Grass Valley	Focus or LDX cameras
Sony	HDC-1000/2000/3000/4300 series camera chains with SMPTE fiber connections
Panasonic	AK-HC3900

**QS4-APE**

Throwdown Power Extension With Optical Pass Through

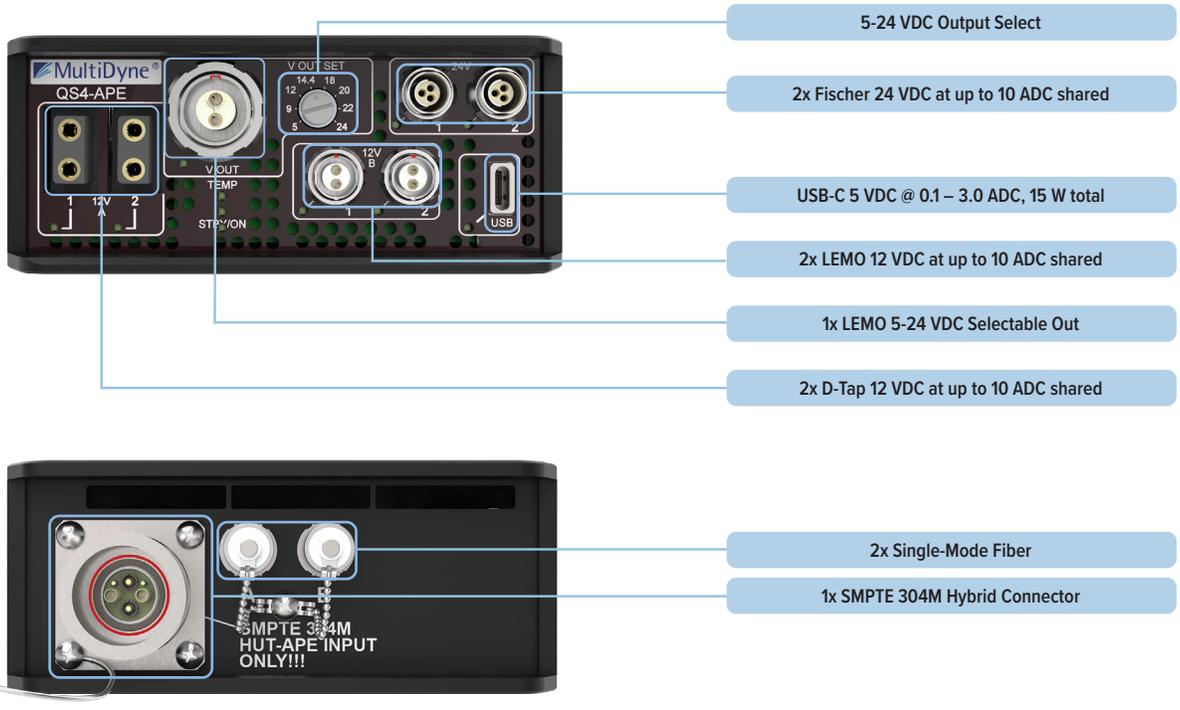


QS4-APE Rear



QS4-APE Front

The QS4-APE model is a versatile “throw-down” unit providing a selectable 5 VDC, 9 VDC, 12 VDC, 14.4 VDC, 18 VDC, 20 VDC, 22 VDC or 24 VDC main output via a LEMO EEG.2B.302.CLL connector for general applications, as well as multiple accessory outputs: 2, D-Tap/P-Tap 12 VDC outputs; 2, LEMO EEG.0B.302. CLL connector 12 VDC outputs; 2, Fischer DBP 102 A052-139 connector 24 VDC outputs and a “power only” USB-C port to operate and charge devices such as cell phones, computer tablets etc. with up to 15 WDC available power.



## SB-APE

Advanced Power Extension 12-24VDC  
Integrated Accessory for SilverBack Series



SilverBack-APE (Control Side)

Digital Cinema Camera manufacturers are increasingly introducing cameras that require 24VDC power in order to operate. In response, MultiDyne has developed the APE Advanced Power Extension integrated accessory for the SilverBack lineup. In addition to powering these new 24VDC cameras, the APE provides comprehensive accessory power outputs for servos, monitors and just about any accessory you need to power on your camera rigs.

The SB-APE model is tailored more specifically to “camera-back” operation, where the APE power supply is integrally joined with MultiDyne’s camera docking ‘Silverback’ product. The main output from the SB-APE model is ported to one of three selectable outputs to provide optimal flexibility: A 3-Pin Female XLR for 24 VDC output, a 4-Pin Female XLR for 12 VDC output or a battery emulator plate affixed to the SB-APE to dock directly onto the camera’s battery plate.

The voltage output to the camera is automatically adjusted to 12 VDC or 24 VDC based on configuration information detected from the battery plate on the camera. Additionally, the same complement of accessory outputs for the QS4-APE model are also present on the SB-APE model.

## POWER OUTPUTS



SilverBack-APE (Connector Side)

USB-C 5 VDC @ 0.1 – 3.0 ADC, 15 W total

2x D-Tap 12 VDC at up to 10 ADC shared

2x Lemo 12 VDC at up to 10 ADC shared

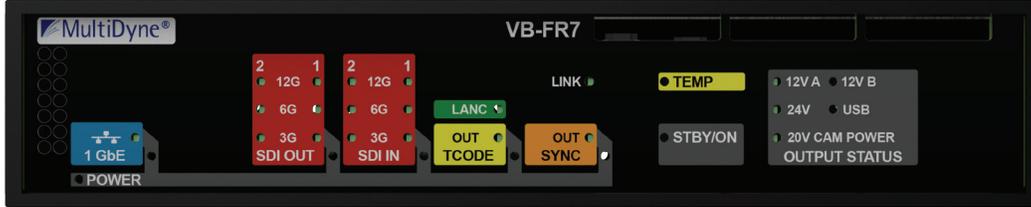
2x Fischer 24 VDC at up to 10 ADC shared

1x 3pin XLR 24 VDC at up to 10 ADC

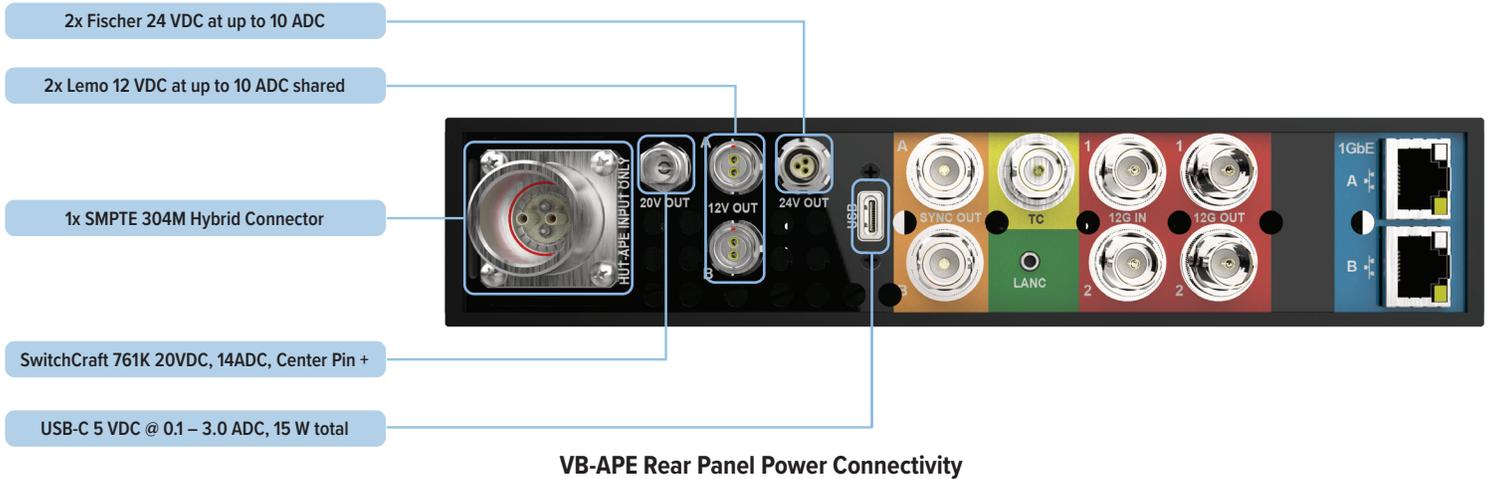
1x 4pin XLR 12 VDC at up to 10 ADC

## VB-APE

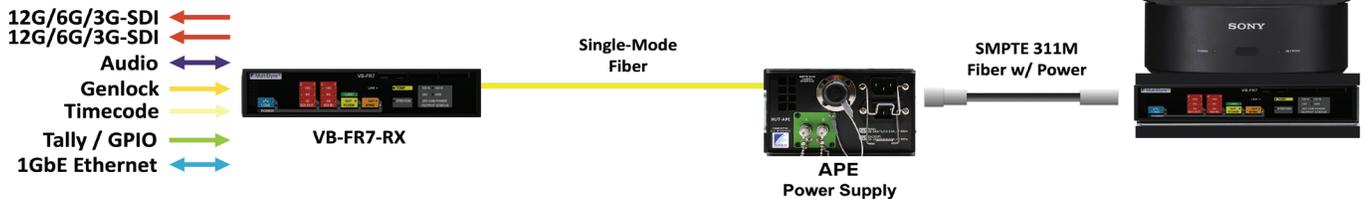
Advanced Power Extension



The VB Series transmitter mounts directly to the FR7 camera making it easy to integrate into ceiling mount and camera jib applications. The receiver can be another rack-mounted VB unit or a MultiDyne openGear card. Long distance connectivity over one strand of single-mode fiber means the FR7 can be deployed in just about any position around the venue. Adding remote power over SMPTE Hybrid Fiber negates needing local power at the camera position for both the VB transmitter and FR7 camera.



## VB-FR7 Remote PTZ with HUT-APE

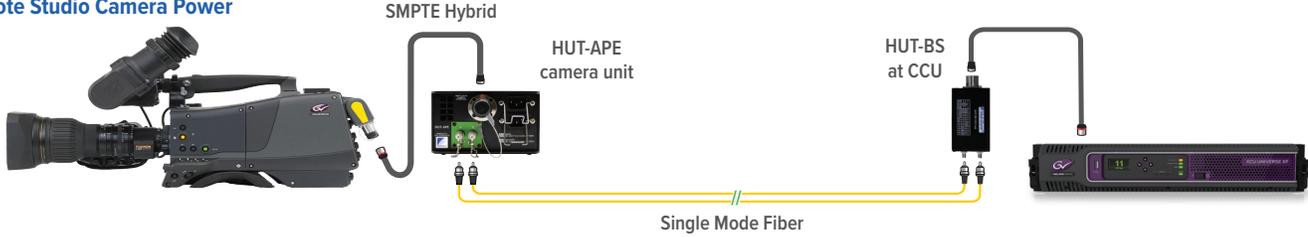


Contact MultiDyne to learn more about how the VB optical transport platform can take the FR7 to the extreme.

## APPLICATIONS

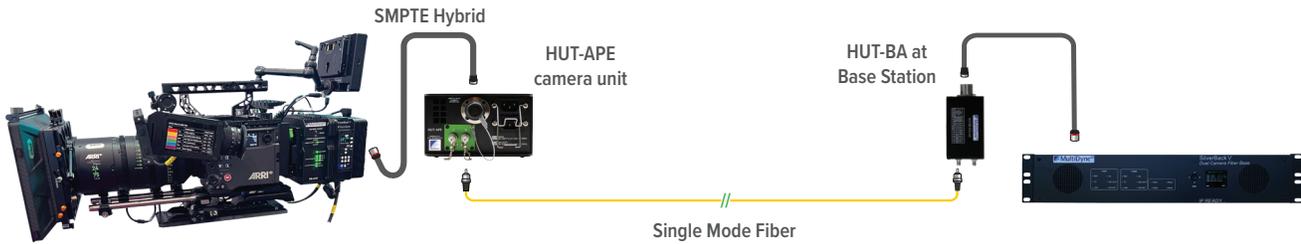
### HUT-APE

SMPTE Hybrid Fiber Elimination  
& Remote Studio Camera Power



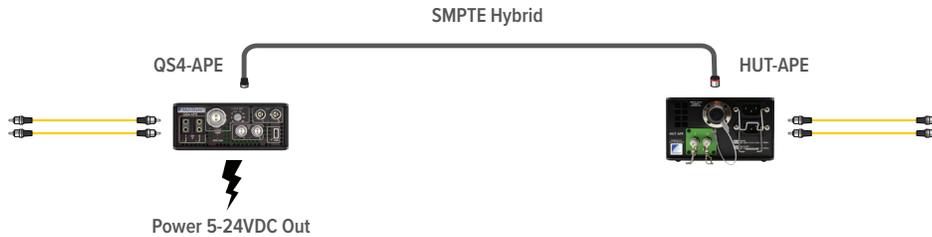
### SB-APE + HUT-APE

SMPTE Hybrid Fiber Elimination  
& Remote SilverBack+Camera Power



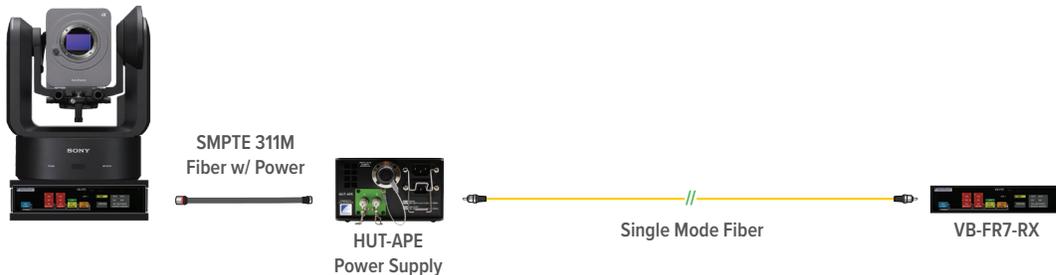
### QS4-APE + HUT-APE

SMPTE Hybrid Fiber Remote Power Extension  
w/ Dual Fiber Optical Passthrough

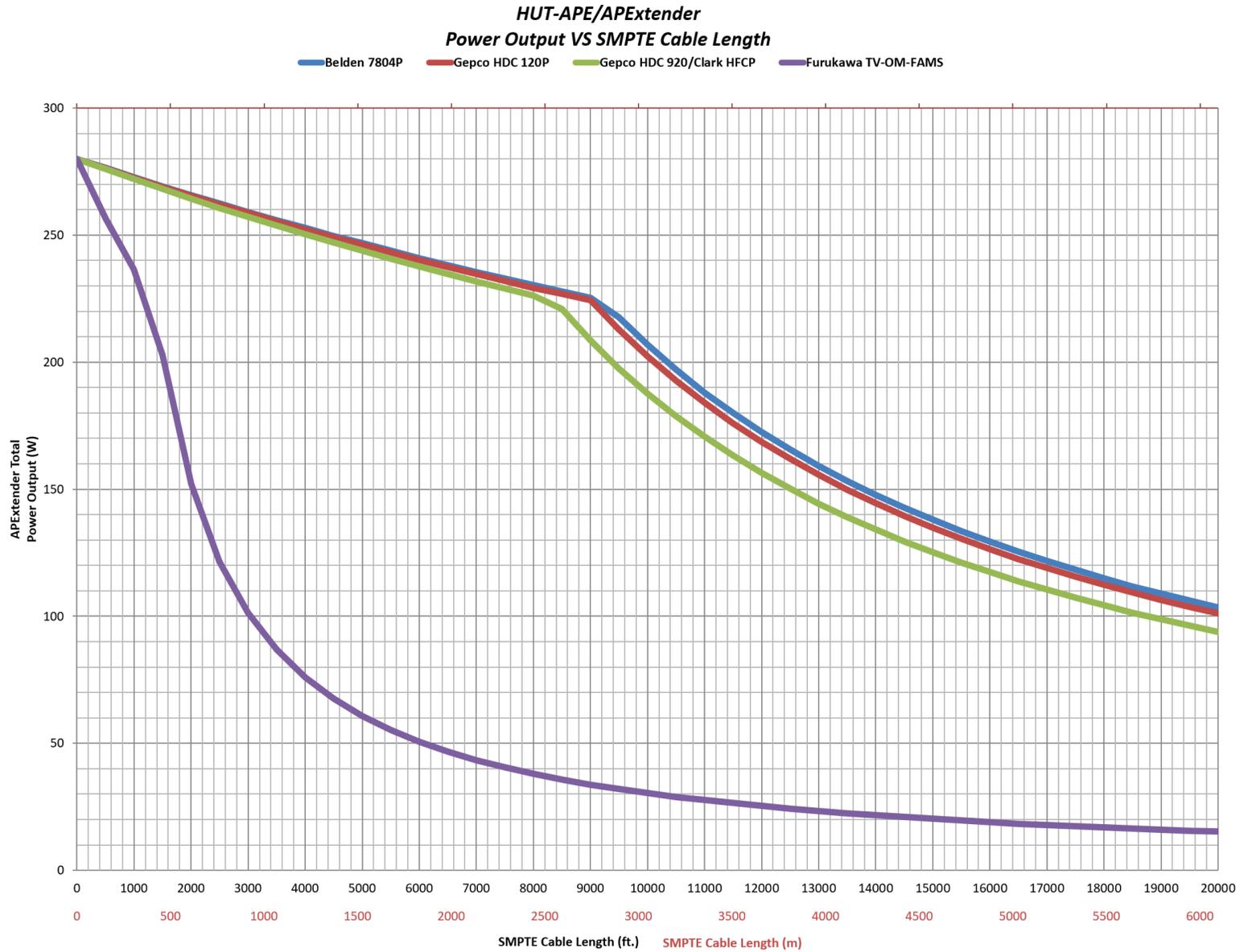


### VB-APE + HUT-APE

SMPTE Hybrid Fiber Remote Power Extension  
for PTZ/POV Cameras



**SMPTE HYBRID FIBER POWER DISTANCES**



## TECHNICAL SPECIFICATIONS

### QS4-APE Power Output

Connector	Output
LEMO EEG.2B.302.CLL x1	Switch Selectable Voltage 5VDC, 25ADC 9VDC, 25ADC 12VDC, 23.3ADC 14.4VDC, 19.4ADC 18VDC, 15.5ADC 20VDC, 14ADC 22VDC, 12.7ADC 24VDC, 11.6ADC
D-TAP/P-TAP x2	12VDC, up to 10ADC Shared
LEMO EEG.OB.302.CLL x2	12VDC, up to 10ADC Shared
FISCHER DPB 102 A052-139 x2	24VDC, up to 10ADC Shared)
FISCHER DPB 102 A052-139 x2	<10W (no SMPTE Output Connection)
USB-C x1	5VDC, 0.1 to 3A, 15W Total

### SB-APE Power Output

Connector	Output
D-TAP/P-TAP x2	12VDC, up to 10ADC Shared
LEMO EEG.OB.302.CLL x2	12VDC, up to 10ADC Shared
FISCHER DPB 102 A052-139 x2	24VDC, up to 10ADC Shared
USB-C x1	5VDC, 0.1 to 3A, 15W Total
3-PIN XLR, FEMALE x1	24VDC, up to 10ADC
4-PIN XLR, FEMALE x1	12VDC, up to 10ADC

### VB-APE Power Output

Connector	Output
LEMO EEG.OB.302.CLL x2	12VDC, up to 10ADC Shared
FISCHER DPB 102 A052-139 x1	12VDC, up to 10ADC
FISCHER DPB 102 A052-139 x2	24VDC, up to 10ADC Shared
USB-C x1	5VDC, 0.1 to 3A, 15W Total
SWITCHCRAFT 761K	20VDC, 14ADC, Center Pin Positive *Power accessory Cable Available for Sony FR7